










# Carbon Steel Salvage Open Head 85-Gallon Drum Specification

Press  to see Check List only.

Description	Package ID Number	Packaging Filling Instructions *
Drum, Carbon steel , open head, 85 gallon, Salvage Drum, <b>UN 1A2/X 400/S</b> , 1.5189 mm Nominal (16 gauge), 26 in. ID	112-6430	CHK-28

**Mfg. Details Per: Packaging Specifications**  
**No. 1A2-104-00**  
**Issue Date: February 1, 2000**  
**Revised Date:**

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\* For future use

Company  
Name  
Here

## Packaging Specifications

### Open Head Carbon Steel Salvage Drum

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## 1.0 GENERAL DESCRIPTION

Open Head (OH) Carbon Steel Salvage drum with welded seams, 3 rolling hoops, steel body, steel head, conventional (with seams) construction. Steel gauge and specific variations as specified in [Appendix A-1](#) for 85 and 110 gallon drum capacity.

### 1.1 United Nations Designation - UN 1A2 /X \*\*/ S/ \* [per 49 CFR, §178.503]

*Note: Salvage drums acceptable for liquids, as well as solid material, although not dual marked.*

- 1A2 = Open head steel drum.
- X = Suitable for Packing Group I, II, and III materials.
- Y = Suitable for Packing Group II and III materials.
- \*\* = Maximum allowable gross weight in kilograms for which the drum was tested .
- S = Designation indicates packaging is for solid materials [*or combination packaging*].
- \* = The last two (2) digits of the calendar year in which the container was manufactured.

Specific UN Markings are specified in the Purchase Order Description for the referenced package ID number for each specific drum, which are the Company "minimum" UN requirements.

### 1.2 Size:

Inside diameter (in inches) [as specified in the Purchase Order Description for the referenced package ID number].

## 2.0 MATERIAL DETAILS

Drum construction must comply with Title 49, Code of Federal Regulations (49 CFR), §178.504 (latest edition) for steel drums, and the following minimum requirements. Manufacturer shall document appropriate quality control on incoming raw material. No significant changes to the manufacturing process or raw material is allowed without prior approval of the Company. Steel thickness dimensions/tolerances in conformance with TABLE, per [Appendix A-1](#).

### 2.1 Drum Body:

Cold rolled steel, ASTM A 366 or equivalent. Top of body rolled to form 1/2-inch false wire; see [Appendix A-1](#) for steel size for stated drum capacity.

### 2.2 Drum Head:

Cold rolled steel, ASTM A 366 or equivalent; see [Appendix A-1](#) for steel size.

### 2.3 Drum Bottom:

Cold rolled steel, ASTM A 366 or equivalent; same steel size as drum body.

### 2.4 Body Seams:

Welded (on-line, continuous welder)

### 2.5 Chimes:

Mechanically seamed; bottom chime triple seamed *or* double seamed, if double seam, drum meets the UN test criteria, as specified.

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## 2.6 Gasket:

Closed-cell rubber, glued into lid--gasket material and size as necessary to meet UN performance tests. Gasket to have an operating range of - 40 °F to + 158 °F.

## 2.7 Rolling Hoops:

Three (3) each separate rolling hoops formed into the drum body, with one not more than three (3) inches from top drum curl. Rolling hoops to be in accordance with ANSI MH2-1997 Standards.

## 2.8 Closure:

Twelve (12) gauge bolt type locking ring, welded lugs, one lug threaded, with steel bolt. Locking ring painted, coated, or galvanized to prevent corrosion. See [Appendix A-1](#) for minimum required bolt sizes.

**Manufacturer/supplier** must furnish the Company, in writing, closure requirements, as performed for the UN design test; per 49 CFR ¶178.2(c)(1). It must be identified on the closure instructions specifically as to the Company drum to which the instructions apply. Ref: ¶9.0 for distribution.

## 2.9 Surface Preparation:

Surfaces shall be prepared to retard rust formation, or be sufficiently cleaned for application of interior and exterior coatings.

## 2.10 Interior finish:

85 gallon: Lined with Morton Series 46; 2/3 Epoxy, 1/3 Phenolic coating, 1 mil.  
[or an equivalent material, after approval by Company Packaging Operations]

110 gallon: Lined with a clear phenolic coating, 1/10 mil, or equal, for rust prevention.

## 2.11 Exterior finish:

Body painted with SSCI (Steel Shipping Container Institute) White, and White Head; 0.8 - 1.0 mil.

## 2.12 Seaming Compound:

Bottom chime must be sealed with a seaming compound, and applied in conformance to standard manufacturing quality procedures, to ensure no leakage/seepage.

## 2.13 Cleanliness:

Finished drums must be free of rust, dirt, oil, solvents, metal shavings, foreign contaminants, and interior moisture.

## 3.0 CONTAINER PERFORMANCE CRITERIA

Manufacturer shall successfully test and certify that containers meet or exceed the requirements of 49 CFR, ¶178.600 - 178.608, for the Packing Group I level.

### 3.1 Performance Test Documentation:

Upon request, the manufacturer must be capable of providing copies of the performance test documentation for purchased packagings, as required by 49 CFR, ¶178.601(l) for the UN certification marked packaging. Periodic audit copies will be requested randomly on purchased UN packagings. Ref: ¶9.0.

### 3.2 Performance Tests:

The specified drums require the **US Department of Transportation** UN performance criteria for design qualification testing, periodic retesting, and production tests established in 49 CFR, ¶178.600 - 178.608.

**NOTE TO SELLER:** The UN test/markings certifications must be made by the drum manufacturer or a Department of Transportation approved third party tester.

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### 4.0 QUALITY ASSURANCE

The Seller shall assure, and be responsible, that the quality of the drums furnished under this document are of good quality, as pursuant to industry standard manufacturing practices for steel drums, including the materials/components used in the manufacturing of the stated steel drums.

The Seller shall meet the requirements stipulated in this document, and the specific requirements of the Purchase Order Description for the specific drum as specified in the Purchase Order.

#### 4.1 Manufacturer's Certification:

By the act of placing the UN performance criteria markings on each drum purchased, the manufacturer acknowledges he has certified, and accepted responsibility, that the stated drum design meets or exceeds the U.S. Department of Transportation's UN performance requirements as stipulated in ¶3.2 of this document and in accordance with the markings prescribed in 49 CFR, ¶178.503.

In addition, this certification marking acknowledges that the drum manufacturer has complied with the specific standards for steel drums specifically listed in 49 CFR ¶178.504.

#### 4.2 Receiver Inspections:

The following inspections will be performed on the incoming drums by a Company designee to determine the drums meet quality standards and the requirements of this document. However, the Company is not limited to the following inspections to determine quality and specification conformance. Conformance will be indicated by a Y or N in the "Y/N" column, and negative responses documented and processed through the Company's Quality Assurance Program.

*NOTE: Checklist for this specification is on the following page.*

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*This checklist is to be reproduced for QC Inspections.*

## Receiver Inspection Quality Control (QC) Checklist for Incoming Steel Drums

	QC Conformance	Y/N	<< "No's" to be documented in accordance with Company's QA Program
1	Capacity (¶1.0)		Drum is the capacity specified in the Purchase Order.
2	Drum Surface (¶2.9 and 4.0)		Clean, no significant scratching, dings or dents in drum, no significant corrosion, on exterior and interior surface of drum.
3	Locking rings, chimes (¶2.5)		Bolted locking rings are painted steel, contain bolt size specified in <a href="#">Appendix A-1</a> , and shows no significant rusting /corrosion.
			Bolted locking rings close tightly, not loose around drum lid.
4	Drum lids (¶2.11 and 4.0)		Lids are painted WHITE, show no significant rusting/corrosion or dents.
5	Lid Gaskets (¶2.6)		Gaskets securely glued into the drum lids.
6	Drum interior (¶2.10)		Visually verify lined, including lids.
7	Drum exterior (¶2.11)		Painted White [SSCI (Steel Shipping Container Institute) standard].
8	Markings (¶5.0)		Drums marked (as a minimum) with Company specified UN markings, per Purchase Order Description.
			Drums legibly marked (embossed) on drum bottom in accordance with required 49 CFR markings, and specified gross test weight.
			Markings include the manufacturer's identification -- company name or registered symbol (initials or M-number), or test agency code; after USA/. Ref: 49 CFR, ¶178.503(a)(8).
9	Side Markings (¶5.0)		The required UN markings are durably and legibly marked.

Package ID Number \_\_\_\_\_

P. O. Number \_\_\_\_\_

Total Units Received \_\_\_\_\_

Inspection Method: Per Company's QA Program

Sample Size \_\_\_\_\_ [Based on ANSI/ASQC Z1.4-1993]

Non-Conformance Document No. \_\_\_\_\_

Inspector/Date \_\_\_\_\_

Additional comments on back: \_\_\_\_\_ check, if yes.

The above QC inspection check list shall be accomplished for each order based on random samples of incoming carbon steel drums, by QC personnel to determine manufacturer's conformance to the specified Packaging Specifications.

Shipments of carbon steel drums not meeting specified requirements will be returned to the seller for credit.

QC inspections resulting in noncompliance with these Packaging Specifications will be cause for rejection of the entire shipment.

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## 5.0 MARKING

As a minimum, each drum shall be marked in accordance with 49 CFR, ¶178.2, 178.3, and 178.503 in a conspicuous location on exterior surface of the drum. Markings shall have a minimum letter height of 1/2-inch. Markings must include the manufacturer's identification -- company name or registered symbol (initials or M-number), or test agency code, per 49 CFR, ¶178.503(a)(8).

Additionally, drums are to be marked with the UN markings as stipulated in ¶1.1 of this specification, and specifically stated in the Purchase Order Description.

The letters: CATN--(dash) plus the last four (4) digits of the package ID number must be marked below the UN markings:

110 gallon = CATN--6100

85 gallon = CATN--6430

## 6.0 INTENDED USE

Containers are intended for Packing Group I, II, and III hazardous materials in solid or liquid form. Maximum fill capacity of the drum shall not exceed the tested gross weight or density marked on the drum.

## 7.0 SUGGESTED MANUFACTURERS

The following list of suggested manufacturers have demonstrated ability to comply to the requirements set forth in this document. However, this list does not guarantee current or continued availability as a suggested manufacturer source:

[Enter Suggested Manufacturer\(s\) Here:](#)

The Seller must advise the Company prior to any change in the current source (manufacturer) of packaging materials described in this Packaging Specification.

Any Manufacturer that satisfactorily demonstrates to the Company the capability to furnish packaging in compliance with this Packaging Specification, may be added to the above listing.

## 8.0 AUTHORIZED CHANGES

Changes/revisions in the requirements specified in this document will only be authorized by the Company.

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### 9.0 DISTRIBUTION OF UN PERFORMANCE TEST REPORTS (per ¶3.1) and CLOSURE INSTRUCTIONS (per ¶2.8)

A) Closure instructions must be furnished for each initial order, and annually (at the minimum) for each type/size package purchased by Company to the address below.

B) Upon specific request, UN performance test documentation for each specified order/shipment will be submitted directly to the Company at the address below.

**COMPANY NAME AND ADDRESS** (enter information below)

<b>SPECIFIC REQUIREMENTS for UN PACKAGING SPECIFICATIONS</b>	<b><u>APPENDIX A-1</u></b>	<b>Issued/Revised: February 1, 2000</b>
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### CARBON STEEL DRUM CONSTRUCTION VARIATIONS

OPEN HEAD (OH) DRUMS <i>[Fully Removable Heads]</i>								TIGHT HEAD DRUMS		
<i>No. 1A2-104-00</i>			<i>No. 1A2-100-00</i>					<i>No. 1A1-101-00</i>		
Construction	110 gallon	85 gallon	55 gallon	30 gallon	15/16 gallon	10 gallon	5 gallon	55 gallon	30 gallon	16 gallon
Nominal, mm	<b>1.5189</b>	<b>1.5189</b>	1.5189	1.2141	0.9119	0.9119	0.7595	1.2141	1.2141	0.9119
** Steel Thickness	<b>.0598 in.</b>	<b>.0598 in.</b>	.0598 in.	.0478 in.	.0359 in.	.0359 in.	.0299 in.	.0478 in.	.0478 in.	.0359 in.
Minimum, mm										
<i>Drum gauge</i>	<b>1.3538</b>	<b>1.3538</b>	1.3538	1.0871	0.8230	0.8230	0.6833	1.0871	1.0871	0.8230
	<b>.0533 in.</b>	<b>.0533 in.</b>	.0533 in.	.0428 in.	.0324 in.	.0324 in.	.0269 in.	.0428 in.	.0428 in.	.0324 in.
	<b>16 ga.</b>	<b>16 ga.</b>	16 ga.	18 ga.	20 ga.	20 ga.	22 ga.	18 ga.	18 ga.	20 ga.
Head Thickness	<b>1.5189</b>	<b>1.5189</b>	1.5189	1.2141	0.9119	0.9119	0.7595	1.2141	1.2141	0.9119
Same	<b>16 ga.</b>	<b>16 ga.</b>	16 ga.	18 ga.	20 ga.	20 ga.	22 ga.	18 ga.	18 ga.	20 ga.
Tolerances-										
Rolling Hoops	<b>3 each</b>	<b>3 each</b>	3 each	2 each	2 each	2 each	2 beads	2 each	2 each	2 each
Locking Ring –mm	<b>2.6568</b>	<b>2.6568</b>	2.6568	2.6568	1.5189	1.5189	0.9119	----	----	----
Nominal-	<b>12 ga.</b>	<b>12 ga.</b>	12 ga.	12 ga.	16 ga.	16 ga.	20 ga.			
Bolt Size	<b>5/8 inch</b>	<b>5/8 inch</b>	5/8 inch	5/8 inch	3/8 inch	5/16 inch	5/16 inch	----	----	----
*see note below										
Gaskets	<b>Required</b>	<b>Required</b>	Required	Required	Required	Required	Required	----	----	----
(glued in lid)										
Bung Openings	<b>No</b>	<b>No</b>	No	No	No	No	No	2 & ¾ inch	2 & ¾ inch	2 inch
Interior Lining	<b>Clear</b>	<b>Epoxy/</b>	Epoxy/	Epoxy/	Clear	Clear	Clear	Clear	Clear	Clear Phenolic
[Ref: ¶2.10]	<b>Phenolic</b>	<b>Phenolic</b>	Phenolic	Phenolic	Phenolic	Phenolic	Phenolic	Phenolic	Phenolic	

\*NOTE: Counterfeit bolts, as stipulated on current DOE listing, will not be accepted. Bolts are of foreign origin.

\*\*NOTE: Steel thickness dimensions/minimum tolerances, in millimeters, are converted from the DOT Gauge Table, CFR 49, ¶173.24, pre-HM-181 docket. [inches x 25.4000 = millimeters; current CFR 49, ¶171.10(c)(2)]

- NOTE: Minimum gauge thickness tolerances, as shown above, apply (block 1).